AMENDMENTS TO THE SPECIFICATION

- Please amend the paragraph starting at page 7, line 18, as follows:

In Fig. 5, leakage gas stream 46 can pass through the open (unsealed) porous end 14 of tube 10 and exit the surface 16 of tube 10 without having to pass through microporous separation membrane 20. Alternatively, leakage gas stream 46 can flow into the plenum region 38 located in-between the outside of tube 10 and the inside of union coupling 32, then flow into the outer surface 16, around the seal ring 36 through the connected porosity of tube 10, and exiting back out through surface 16 on the far side of seal ring 36, also creating a leakage path. In both cases, the lack of a gas impermeable end seal allows leakage gas 46 to bypass flowing through microporous separation membrane 20, which degrades the overall efficiency of the separation process. <u>Fig. 5 illustrates an example where the size of pores in porous ceramic tube 10 varies in the radial direction across the thickness of the wall of tube 10, i.e., from smaller diameter pores near the inner diameter of tube 10 to larger diameter pores near the outer diameter of tube 10.</u>

- Please amend the paragraph starting at page 7, line 28, as follows:

Fig. 6 illustrates a schematic cross-section view of an example of a gas separation assembly <u>50</u> including a porous ceramic tube <u>10</u> with a microporous separation membrane <u>20</u> and a glass-based glaze end seal <u>12</u>, coupled to a feed tube <u>34</u> by a union coupling <u>32</u>, according to the present invention. In this example, porous ceramic tube 10 has a gas impermeable end seal 12 coating the end 14 of tube 10 and a portion (L) of the outer surface 16 of tube 10. End seal 12 serves to prevent leakage of any gas through the end 14 of tube 10, or through the outer surface 16; effectively preventing any gas from bypassing microporous separation membrane 20. End seal 12 is free of any materials that comprise the microporous separation membrane 20, therefore

providing a smooth surface for compressing seal ring 36 onto. End seal 12 can also provide additional strength to the porous ceramic tube 10 to resist the compressive force of seal ring 36 applied by coupling 32.

- Please amend the paragraph starting at page 11, line 13, as follows:

In both examples, the gamma-alumina tubes were baked at 100 C in air for two hours prior to coating to dry them. The mixture of glass+Fluorinert does not appear to be as homogeneous or colloidal as the amyl acetate mixture, even with ultrasonic mixing help. The coating appears more uniform with the amyl acetate also. The Fluorinert, however, is easier to mix but the Fluorinert also evaporates more quickly and the coating may be affected more by the temperature of the alumina tubes when ~~the~~ <u>they</u> are coated. The high density (1.8-1.9 g/cc) of Fluorinert serves to suspend the glass particles in the slurry. The higher the density of solvent, the slower the settling of the glass particles (density = 2.28 g/cc). Two types of Fluorinert were used that have the highest densities in the family of Fluorinert fluids: FC-42 (1.9 g/cc) and FC-77 (1.8 g/cc).